

alarming depression which resulted from the same application while he was in the cold stage.

The general conclusions are—

1. The usual effect of a strong douche or shower-bath is the immediate depression of the pulse. By the first shock of water between 64° and 68° F. the pulse becomes weak and irregular, and may be reduced in rate even fifty beats in the minute. After the first shock the pulse recovers a little, but remains weak until the secondary effect or showering comes on, when it becomes weaker and intermittent, and may be quite imperceptible. After ten to fifteen minutes the pulse remains very small and weak, and shivering continues whilst the experiment lasts.

2. If the shower-bath is a small one (eight gallons), and the person taking it in good health, no great difference is perceived in the pulse whether the water is hot (110°) or warm (74° F.). If the water is very cold (47° F.) the pulse becomes smaller, but the rate is not affected.

With a shower-bath giving twenty gallons per minute a difference of twenty degrees (from 70° to 50° F.) causes a great difference in the shock. The difference in the after-effect, or shivering, is not so marked. The depression of the pulse when the shivering comes on is more continuous with the colder water, and is more manifest up to the end of the experiment.

3. When the pulse is raised above, or depressed below, its healthy standard, the shower-bath or douche produces very much less or a much greater effect than would be produced by the bath under ordinary circumstances.

As it seemed possible that a part of the reduction of the pulse might be due to the action of the cold water upon the capillaries and the radial artery in which the pulse was felt, a set of experiments were made in which the forearm and hand were exposed to temperatures varying from 25° to 124° F. The results of these experiments may be thus stated:—

1st. When one arm is in water at 50° and the other in air at 46° F., no difference in the pulse is observed in fifteen minutes.

2d. When one arm is in water at 110° and the other in air at 46° F., little if any difference could be felt in the same time.

3d. When one arm is in water at 44° and the other in water at 107° F., there was the same result in the same time.

4th. Even one arm at 33° and the other at 112° gave no result.

5th. Still lower and higher temperatures, 25° and 115° F., did not give any decided result in fifteen minutes.

6th. The douche-bath on the arm and hand, at 42°, produced no greater effect on the pulse than still water at 44° F.

Hence, generally, it follows, that no part of the effect produced by the shower-bath on the pulse, depends on the action of the water on the hand and forearm in which the pulse is felt.—*Proceedings of Royal Med. and Chirurgical Society*, April 14, 1857.

9. *The Bittera Febrifuga as an Antiperiodic.*—The practitioners of Martinique having transmitted to Europe highly favourable accounts of the febrifuge qualities of a plant found there, the Minister of Marine has directed that its efficacy should be tested at the different naval hospitals; and in this paper M. DELILOUX furnishes an account of the results of the trials he has made of it at Brest. The plant is one of the Rutaceæ, and has been termed *bittera febrifuga*, from the English term “bitter-ash,” by which it is popularly known at Martinique. Its active principles are resident in a bitter resinoid, and in a bitter principle which it is proposed to term *bitterine*, and which is very analogous, if not identical, with *quassit* or *quassine*, obtained by Wiggers from *quassia amara*.

The bittera may be administered in the form of powder, infusion, or extract, or the bitterine itself may be given in pills. The intense bitterness of the drug disinclines some patients to it. M. Delioux has, as yet, only given it in the form of extract, made into pills, administering from 10 to 15 grains, in divided doses, during the pyrexia. This, he believes, is a better mode of giving this and other bitter tonics used as succedanea to quinine, than prescribing them, as in the case of quinine itself, in a large dose just before the paroxysm. Al-

though declared in the Antilles to be an almost infallible febrifuge, sometimes superior to quinine itself, M. Delioux believes it to be, in this respect, not only much inferior to quinine, but also second even to arsenic—superior to the latter though it be in the tonic power it exerts upon the digestive and general system. After this, however, it should be ranked as one of the best succedanea; and, doubtless, as a good bitter tonic it is destined to play an important part in the relief of many organic and functional debilitated conditions, and especially in the anaemic and cachectic states resulting from paludal intoxication. In a great number of æsthenic diseases, in anaemia, in chlorosis, in convalescence from fever, in exhaustion from hemorrhages or discharges, and whenever it is desired to impart tone to the digestive and assimilatory powers, the bittera is indicated. In some forms of gastralgia, as far as M. Delioux's experience has gone, he believes it will prove very useful.—*Med. Times and Gaz.*, April 4, 1857, from *Bull. de Thérap.*

10. Therapeutic Employment of Cocoa-Nut Oil. By Dr. PETTENKOFER.—For some years past, cocoa-nut oil has been employed in the Munich Hospitals in place of lard, as being far less liable to become rancid. It is especially suited for frictions, as the warmth of the skin speedily renders it completely fluid and absorbable, while lard remains unabsorbed, soiling the linen and clothes, and, in spite of all cleanliness, giving rise to a rancid smell. Ointments of iodide of potassium made with lard, even when quite fresh, speedily become more and more yellow, pure iodine in place of the iodide being present. Made with cocoa-nut oil, there is not the least change of appearance for two months or more. The still frequent employment of butter in eye-salves might advantageously be replaced by that of cocoa-nut oil. Various ointments, too, if prepared with this, might be kept ready prepared in the shops, as they would not then undergo the changes they do when made with lard. Moreover, this oil will combine with a third more of water or other fluids than lard will, a matter of importance for the combination of extracts and solutions of salts. It is of a moderate price, usually of a very white colour, and possesses a peculiar smell, which is not disagreeable to most persons.—*Med. Times and Gaz.*, July 18, from *Buchner's Repert.*, Bd. v.

11. Physiological Action of the Disulphate of Quinia.—Dr. H. RANKE states (*Med. Times and Gaz.*, May 30, 1857) that he has found, as a uniform result of five experiments which he has made on three healthy individuals, that the disulphate of quinia diminishes the quantity of uric acid in the urine.

"The importance," he observes, "of this action of the drug, if it prove to be constant, is obvious. Hitherto, our notions on the physiological action of quinia have been exceedingly deficient, and so is our knowledge of the real nature of ague, for which quinia is such an admirable remedy. Now, in ague there is, according to all observers, a considerable increase of uric acid in the urine, and, moreover, the spleen, the organ principally affected in ague, contains, according to Scherer, normally, some uric acid. Is it not possible that, by the study of the physiological action of quinia, we may in time be able to throw some light even upon the nature of ague and the process of its cure?"

12. Pyrophosphate of Iron and Soda in Anæmia.—Messrs. FOLLET and BAUME call attention (*Gazette Hebdomadaire de Méd.*, May 20) to the advantages of the pyrophosphate of iron and soda as a remedy in anæmia, and the diseases of which that condition is a symptom, or with which it is coincident. They state that, in 1849, Dr. Leras presented to the Academy of Sciences a work on "The Action of the Gastric Juice on the Preparations of Iron employed in Therapeutics;" and that in 1855 he presented to the Academy of Medicine a memoir in which he expressed the following opinions:—

"1. The ferruginous preparations employed in therapeutics are all more or less precipitated, or transformed into oxide of iron in the stomach.

"2. The pyrophosphate of iron and soda is an exception.

"3. This salt seems destined to take a place among the most efficacious preparations of iron."